(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 22 July 2004 (22.07.2004)

PCT

(10) International Publication Number WO 2004/060949 A1

(51) International Patent Classification⁷: 18/72, 18/12, C09D 175/14, C08G 18/61

C08G 18/08,

PAJERSKI, Anthony [US/US]; 9911 Brecksville Road, Cleveland, OH 44141-3247 (US).

(21) International Application Number:

PCT/GB2003/005465

(74) Agents: SCHMITT, Maja et al.; Intellectual Property Group, Avecia Limited, PO Box 42, Hexagon House, Blackley, Manchester M9 8ZS (GB).

(22) International Filing Date:

16 December 2003 (16.12.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0300225.0

4 January 2003 (04.01.2003) GI

(71) Applicant (for all designated States except MN, US): NE-ORESINS INC. [US/US]; 730 Main Street, Wilmington, MA 01887 (US).

(71) Applicant (for MN only): AVECIA LIMITED [GB/GB]; P.O. Box 42, Hexagon House, Blackley, Manchester M9 8ZS (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COOGAN, Richard, George [US/US]; 730 Main Street, Wilmington, MA 01887 (US). GEORGAKAKIS, Nikos, James [US/US]; 730 Main Street, Wilmington, MA 01887 (US). (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: AQUEOUS POLYURETHANE COMPOSITION FOR LOW GLOSS COATINGS

(57) Abstract: An aqueous coating composition having a 60° gloss of ≤ 40 upon drying comprising a self-crosslinkable polyurethane obtained by the reaction of: (A) an isocyanate-terminated pre-polymer formed from components which comprise (I) 5 to 65 wt% of at least one organic polyisocyanate; (ii) 0.1 to 6 wt% of at least one polyol containing ionic or potentially ionic water-dispersing groups, having two or more isocyanate-reactive groups and having a molecular weight in the range of from 100 up to 500 g/mol; (iii) 0 to 30 wt% of at least one polyol containing water-dispersing groups, having two or more isocyanate-reactive groups and having a molecular weight in the range of from 500 to 6000 g/mol; (iv) 10 to 80 wt% of at least one polyol containing crosslinkable groups, having two or more isocyanate-reactive groups and having a molecular weight in the range of from 150 to 6000 g/mol; (v) 10 to 70 wt% of at least one polyol not comprised by (iii) or (iv) having two or more isocyanate-reactive groups and having a molecular weight in the range of from 500 to 6000 g/mol; (vi) 0 to 50 wt% of at least one component not comprised by (i), (ii), (iii), (iv) or (v); where (i), (iii), (iii), (iv), (v) and (vi) add up to 100 wt%; and where the NCO:OH ratio is in the range of from 1.1 : 1.0 to 10.0 : 1.0; and (B) at least one active-hydrogen chain extending compound.



J 2004/060949